Mr. Warren Ewalt
Caterpillar, Inc.
3701 State Road 26 East
Lafayette, IN 47905

Re: **157-11970**
Significant Source Modification to:
Part 70 permit No.: **T 157-7594-00044**

Dear Mr. Ewalt:

Caterpillar, Inc. was issued Part 70 operating permit **T 157-7594-00044** on July 13, 1999 for a stationary internal combustion engine manufacturing source. A first Administrative Amendment 157-11363 was issued on October 25, 1999. A letter requesting a change was received on February 14, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

(g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 42.4 million British thermal units per hour, total, exhausting at stack vents W-13 and W-14. **(Note: The heat input capacity is increasing from 32.2 million British thermal units per hour to 42.4 million British thermal units per hour.)**

(n) Two (2) peak shaving diesel generators, also used as emergency generators, constructed in 1982, one (1) existing in Building R and one (1) existing in building B, maximum heat input capacity: 13.0 million British thermal units per hour, total. **(Note: These were originally evaluated as emergency generators operating at no more than 500 hours per year. With the change to peak shaving, they can operate more than 500 hour per year and still comply with the existing peak shaving limit.)**

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment (AA 157-11889-00044) in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11. The administrative amendment (AA 157-11889-00044) will give the source approval to operate.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact CarrieAnn Ortolani, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
CAO/MES
cc: File - Tippecanoe County
U.S. EPA, Region V
Tippecanoe County Health Department
Air Compliance Section Inspector - Eric Courtright
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

Caterpillar, Inc.
3701 State Road 26 East
Lafayette, Indiana 47905

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 157-7594-00044	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date: July 13, 1999

First Administrative Amendment: 157-11363-00044, issued on October 25, 1999

First Significant Source Modification: 157-11970-00044	Pages Affected: 4, 8, 42, 43, and 63
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

(f) One (1) dual fuel 3600 test stand, identified as M523, constructed in March 1994, with a maximum heat input capacity of 15.3 million British thermal units per hour when operating on diesel fuel and 11.0 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-11 (A and B).

(g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 42.4 million British thermal units per hour, total, exhausting at stack vents W-13 and W-14.

(h) One (1) sound attenuation test stand, identified as M528, constructed in February 1996, with a maximum heat input capacity of 17.0 million British thermal units per hour when operating on diesel fuel and 17.0 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-12A.

(i) One (1) product paint booth, identified as M751, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-1, capacity: 15 engines per hour.

(j) One (1) touch-up spray paint booth, identified as M775, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-2.

(k) One (1) product paint booth, identified as W-3, constructed in 1979, which will be taken out of service in 1999 when the new product paint booth, also identified as W-3, is installed, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 1.25 to 5.0 engines per hour.

(l) One (1) product paint booth, identified as W-3, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 5 engines per hour.

(m) One (1) product paint booth, identified as W-33, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters for overspray controls, capacity: 5 engines per hour.

(n) Two (2) peak shaving diesel generators, also used as emergency generators, constructed in 1982, one (1) existing in Building R and one (1) existing in building B, maximum heat input capacity: 13.0 million British thermal units per hour, total.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches soldering equipment, welding equipment.

(b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

(c) Other activities or categories with emissions equal to or less than the insignificant activity thresholds:

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 42.4 million British thermal units per hour, total, exhausting at stack vents W-13 and W-14.

(n) Two (2) peak shaving diesel generators, also used as emergency generators, constructed in 1982, one (1) existing in Building R and one (1) existing in building B, maximum heat input capacity: 13.0 million British thermal units per hour, total.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the five (5) peak shaving diesel generators shall be limited to 166 kilo-gallons per twelve (12) consecutive months. This usage limit is required to limit the potential to emit of NO_X to less than 40 tons per year. As a result of this limit, CO emissions are limited to less than 100 tons per year, PM emissions are limited to less than 25 tons per year, and PM_{10} emissions are limited to less than 15 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.6.2 Sulfur Dioxide (SO_2) Limitations [326 IAC 7-1.1-2]

Pursuant to CP 157-4123, issued January 9, 1995, and 326 IAC 7-1.1-2 the SO_2 emissions from the five (5) peak shaving diesel generators shall not exceed five tenths (0.5) pound per million British thermal unit heat input.

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

Compliance Determination Requirements

D.6.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the NO_X, CO, and PM_{10} limits specified in Condition D.6.1 and the SO_2 limit specified in Condition D.6.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.6.5 Sulfur Dioxide (SO_2) Emissions and Sulfur Content

Compliance with Condition D.6.2 shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.6.2 by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification;

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel

tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one (1) peak shaving diesel generator, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.6 Record Keeping Requirements

(a) To document compliance with Condition D.6.2, the Permittee shall maintain records in accordance with (1) through (6) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document compliance with Condition D.6.1, the Permittee shall maintain monthly records of the amount of diesel fuel used at the five (5) peak shaving diesel generators.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.6.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: Five (5) peak shaving diesel generators - Section D.6
Parameter: NO_X; fuel usage
Limit: 166 kilogallons of diesel fuel per twelve (12) consecutive months.
NO_X emissions to less than 40 tons per year, CO emissions to less than 100 tons per year, PM emissions to less than 25 tons per year, and PM_{10} emissions to less than 15 tons per year

YEAR: _____

Month	This Month	Previous 11 Months	12-Month Total
	Diesel fuel usage (kgal)	Diesel fuel usage (kgal)	Diesel fuel usage (kgal)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Part 70
Significant Source Modification

Source Background and Description

Source Name:	**Caterpillar, Inc.**
Source Location:	**3701 State Road 26 East, Lafayette, Indiana 47905**
County:	**Tippecanoe**
SIC Code:	**3519**
Operation Permit No.:	**T 157-7594-00044**
Operation Permit Issuance Date:	**July 13, 1999**
Significant Source Modification No.:	**157-11970-00044**
Permit Reviewer:	**CarrieAnn Ortolani**

The Office of Air Management (OAM) has reviewed a modification application from Caterpillar, Inc. relating to:

(I) an increase in capacity of one (1) existing peak shaving diesel generator; and

(II) the change in operation of two (2) diesel generators from emergency generators to peak shaving generators, as well as emergency generators.

Emission units in this review, as they will appear in the permit, are as follows:

(g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 42.4 million British thermal units per hour, total, exhausting at stack vents W-13 and W-14. **(Note: The heat input capacity is increasing from 32.2 million British thermal units per hour to 42.4 million British thermal units per hour.)**

(n) Two (2) peak shaving diesel generators, also used as emergency generators, constructed in 1982, one (1) existing in Building R and one (1) existing in building B, maximum heat input capacity: 13.0 million British thermal units per hour, total. **(Note: These were originally evaluated as emergency generators operating at no more than 500 hours per year. With the change to peak shaving, they can operate more than 500 hour per year and still comply with the existing peak shaving limit.)**

History

On February 14, 2000., Caterpillar, Inc. submitted an application to the OAM requesting to increase the capacity of one (1) existing peak shaving diesel generator and the change in operation of two (2) diesel generators from emergency generators to peak shaving generators, as well as emergency generators. Caterpillar, Inc. was issued a Part 70 permit on July 13, 1999. A first Administrative Amendment (157-11363) was issued on October 25, 1999.

During the Part 70 Review, the source indicated that they have the following insignificant activities:

(aa) Emergency generators as follows:

Gasoline generators not exceeding 110 horsepower.
Diesel generators not exceeding 1,600 horsepower.

This insignificant activity was included in the Technical Support Document, but not included in the permit, because it is an insignificant activity with no specifically applicable rules. The source will now use two (2) of the emergency generators as peak shaving generators, as well as emergency generators. These generators are located in Buildings B and R and have heat input capacities of 8,694,000 British thermal units per hour and 4,282,600 British thermal units per hour, respectively. There are no new facilities at this source.

The source is also increasing the capacity from one (1) of the three (3) peak shaving diesel generators included in the Part 70 permit from 825 KW to 2000 KW. The total increase in heat input capacity is 10.22 million British thermal units per hour.

The applicant has agreed to limit the total of the five (5) peak shaving diesel generators (three (3) existing peak shaving diesel generators, including the increase in capacity, and the two (2) peak shaving diesel generators that were previously only emergency generators) to the existing Part 70 permit limit of 166 kilogallons of diesel fuel per consecutive twelve (12) month period. This limit was previously for the three (3) peak shaving diesel generators in the initial Part 70 Operating Permit.

Since the emissions from the peak shaving diesel generators are limited and the source will continue to comply with the existing Part 70 limit, there is no increase in the total source potential to emit or the potential to emit of the peak shaving operations as a result of this change. There is an increase in the potential to emit of the two (2) generators that were previously only emergency generators. Since the potential to emit NO_X from the two (2) generators can now be 37.2 tons per year, if no other peak shaving generators operate that year, a Significant Source Modification is required pursuant to 326 IAC 2-7-10.5(f)(4)(C), “Any modification with a potential to emit greater than or equal to twenty-five (25) tons per year of Nitrogen oxides (NO_x).” The two (2) generators will be added to the list of significant emission units. There are no additional applicable rules.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 14, 2000. Additional information was received on February 25, 2000.

Emission Calculations

See page 1 of 1 of Appendix A of this document for detailed emissions calculations.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls. The applicant has agreed to limit the total of the five (5) peak shaving diesel generators (three (3) existing peak shaving diesel generators, including the increase in capacity, and the two (2) peak shaving diesel generators that were previously only emergency generators) to the existing Part 70 permit limit of 166 kilogallons of diesel fuel per consecutive twelve (12) month period. This limit was previously for the three (3) peak shaving diesel generators in the initial Part 70 Operating Permit. Therefore, the potential to emit of the peak shaving operations will not increase due to this change. Since the two (2) generators that were previously emergency generators can operate up to the permit limit, the potential to emit of the modification is the difference between the permit limit and the potential to emit of the generators when operating 500 hours per year (see page 1 of 1 of Appendix A).

Pollutant	**Potential To Emit** (tons/year)
PM	0.837
PM_{10}	0.480
SO_2	3.80
VOC	0.753
CO	7.11
NO_X	26.8

HAP's	**Potential To Emit** (tons/year)
TOTAL	negligible

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4)(C), "Any modification with a potential to emit greater than or equal to twenty-five (25) tons per year of Nitrogen oxides (NO_x)." Since the Title V Operating Permit has been issued, this approval is for construction only. The Administrative Amendment (157-11889-00044) will give the source approval to operate the modification.

County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Status
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_X) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Tippecanoe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Tippecanoe County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	49.8
PM_{10}	48.4
SO_2	276
VOC	257
CO	313
NO_X	548

(a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

(b) These emissions are based upon the Limited Potential to Emit Table of the Technical Support Document (TSD) to T 157-7594-00044, issued on July 13, 1999.

Potential to Emit of Five (5) Peak Shaving Generators

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Pollutant	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO_X (tons/yr)
Peak shaving before modification	1.16	0.666	5.28	1.05	9.88	37.2
Peak shaving after modification	1.16	0.666	5.28	1.05	9.88	37.2
Net Emissions	0.00	0.00	0.00	0.00	0.00	0.00
PSD Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to T 157-7594-00044, issued on July 13, 1999, since the source was a major source pursuant to 326 IAC 2-2 when the three (3) peak shaving diesel generators were constructed, the diesel fuel usage is limited to 166 kilogallons per twelve (12) consecutive months. The applicant has agreed to limit the total of the five (5) peak shaving diesel generators (three (3) existing peak shaving diesel generators, including the increase in capacity, and the two (2) peak shaving diesel generators that were previously only emergency generators) to the existing Part 70 permit limit of 166 kilogallons of diesel fuel per consecutive twelve (12) month period. Therefore, there is no increase in the potential to emit as a result of this modification, and the requirements of 326 IAC 2-2 are not applicable to the five (5) peak shaving diesel generators.

326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

Since the potential to emit SO_2 is greater than 25 tons per year, the requirements of 326 IAC 7-1 will

apply to the peak shaving diesel generators. Pursuant to CP 157-4123, issued January 9, 1995, and T 157-7594-00044, issued on July 13, 1999, the sulfur dioxide emissions from the peak shaving system shall be limited to 0.5 pound per million British thermal unit of heat input. The peak shaving diesel generators will be in compliance with this rule if the sulfur content of the fuel does not exceed 0.46% by weight.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this modification.

Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

The changes to the descriptive information in Section A.2 and the Facility Description Box in Section D.6 are as follows:

(g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of ~~32.2~~ **42.4** million British thermal units per hour, **total,** exhausting at stack vents W-13 and W-14.

(n) Two (2) peak shaving diesel generators, also used as emergency generators, constructed in 1982, one (1) existing in Building R and one (1) existing in building B, maximum heat input capacity: 13.0 million British thermal units per hour, total.

Conditions D.6.1, D.6.2, D.6.3, D.6.4, D.6.6 are revised to include all five (5) peak shaving diesel generators. There are no new applicable rules. Changes are as follows:

D.6.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the ~~three (3)~~ **five (5)** peak shaving diesel generators shall be limited to 166 kilogallons per twelve (12) consecutive months. This usage limit is required to limit the potential to emit of NO_X to less than 40 tons per year. As a result of this limit, CO emissions are limited to less than 100 tons per year, PM emissions are limited to less than 25 tons per year, and PM_{10} emissions are limited to less than 15 tons per year. Compliance with this limit makes 326 IAC 2-2

(Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.6.2 Sulfur Dioxide (SO_2) Limitations [326 IAC 7-1.1-2]

Pursuant to CP 157-4123, issued January 9, 1995, **and 326 IAC 7-1.1-2** the SO_2 emissions from the ~~three (3)~~ **five (5)** peak shaving diesel generators shall not exceed five tenths (0.5) pound per million British thermal unit heat input.

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities**.

D.6.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test ~~this facility~~ **these facilities** by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the ~~facility is~~ **facilities are** in compliance. If testing is required by IDEM, compliance with the NO_X, CO, and PM_{10} limits specified in Condition D.6.1 and the SO_2 limit specified in Condition D.6.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.6.6 Record Keeping Requirements

(a) To document compliance with Condition D.6.2, the Permittee shall maintain records in accordance with (1) through (6) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document compliance with Condition D.6.1, the Permittee shall maintain monthly records of the amount of diesel fuel used at the ~~three (3)~~ **five (5)** peak shaving diesel generators.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

In addition, the facility description on the quarterly report form for the peak shaving diesel generators

is revised as follows:

Facility: ~~Three (3)~~ **Five (5)** peak shaving diesel generators - Section D.6

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 157-11970-00044.

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Reciprocating Engines

Company Name: Caterpillar, Inc.
City, Indiana: 3701 State Road 26 East, Lafayette, IN 47905
Part 70: T157-7594-00044
Significant Source Modification: 157-11970-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Emissions calculated based on heat input capacity (MMBtu/hr)

Two (2) peak shaving generators (formerly only emergency generators)
Potential Emissions before controls and limitations

Heat Input Capacity MM Btu/hr	Potential Throughput kgals/year	S=	0.45	= WEIGHT % SULFUR
13.0	813			

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.1	0.0573	0.5	3.2	0.1	0.85
			(1.01S)	**see below		
Potential Emission in tons/yr	5.69	3.26	25.9	182	5.12	48.4

**NOx emissions: uncontrolled = 3.2 lb/MMBtu, controlled with ignition timing retard = 1.9 lb/MMBtu

All peak shaving
Potential to emit after limitations

Heat Input Capacity MM Btu/hr	Potential Throughput kgals/year	S=	0.45	= WEIGHT % SULFUR
2.7	166			

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.1	0.0573	0.5	3.2	0.1	0.85
			(1.01S)	**see below		
Potential Emission in tons/yr	1.16	0.666	5.28	37.2	1.05	9.88

Emergency Generators
Potential to emit at 500 hours per year

Heat Input Capacity MM Btu/hr	Potential Throughput kgals/year	S=	0.45	= WEIGHT % SULFUR
13.0	46			

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.1	0.0573	0.5	3.2	0.1	0.85
			(1.01S)	**see below		
Potential Emission in tons/yr	0.325	0.186	1.48	10.4	0.293	2.76

	PM	PM10	SO2	NOx	VOC	CO
Difference between operating 500 hours and operating up to the limit of 166 kgal/yr	0.837	0.480	3.80	26.8	0.753	7.11

Methodology

Potential Througput (hp-hr/yr) = hp * 8760 hr/yr

Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1 and Table 3.4-2
1 hp-hr = 7000 Btu, AP42 (Supplement B 10/96), Table 3.3-1, Footnote a.
Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)
*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included. The PM10 emission factor is filterable and condensable PM10 combined.
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)